



**REPORT ON THE WEATHER AND STATE OF THE RIVER
FOR JANUARY 1944.**

The Weather

Temperature was about average in the first half of the month but much cooler than usual in the second half. From the 14th to the 23rd day temperatures were continuously well below normal. The number of rainy days was unusually high but except near the coast the showers were very light and in most places the total rainfall was slightly below normal.

At the beginning of the month an extensive depression was situated over the central Mediterranean. Winds in Egypt were southerly and the weather mild. Along the coast the wind strengthened during the afternoon, attaining a velocity of 58 kilometres an hour at Alexandria and causing sandstorms in the north of Egypt. On the 4th and 5th the wind velocity at Alexandria reached 65 kilometres per hour. The weather then became cooler. A vigorous depression was centred over Cyprus on the 8th and over the whole of the eastern Mediterranean and Lower Egypt conditions were very disturbed. The wind blowing from the southwest gave rise to extensive sandstorms, and at Alexandria reached the force of a strong gale, with a velocity of 73 kilometres per hour. Light showers occurred in the northern Delta during the next two days.

From the 12th until the end of the month the eastern Mediterranean was almost continuously an area of low pressure resulting in cold winds, considerable cloud and showery weather in Lower Egypt. Rain was general throughout the Delta on the 13th and 14th, but except at Mex. where 22 mms. were recorded, and at Borollos, the rainfall at no station exceeded 10 millimetres during these days, and in most localities only light or moderate showers took place. The wind was particularly strong on the 19th and at Alexandria a velocity of 100 kilometres an hour was registered in the early morning of that day, and heavy rain fell. Such a high velocity has not been recorded there since February 1938. The weather was very cold, and on the 20th the temperature in Cairo did not rise above 15° C (59° F) or 5° C below normal: light rain fell as far south as Aswan.

The weather was settled and appreciably warmer on the 27th and 28th., but strong westerly winds arrived on the following day, reaching a velocity of 76 kilometres an hour at Helwan, and the weather again became cold with widespread and heavy showers; thunderstorms occurred at coastal stations.

For the month as a whole the barometric pressure was everywhere well above normal and the temperature slightly below. The temperature at Dakhla Oasis in the early morning of the 17th fell to 2° C below freezing point, but at no other station in Egypt did it fall to freezing point at any time during the month. Rain fell at Alexandria on 17 days, compared with a normal of 11 days, but the total amount was below normal. In Cairo there was rain on 10 days but it was very small in amount. In general, rainfall was slightly above normal along the Mediterranean coast of Egypt and slightly below elsewhere, in spite of the unusually large number of rainy days. There was more cloud than usual, sunshine in Cairo averaging 6.5 hours a day compared with a normal value of 7.3 hours.

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DEPARTURE FROM NORMAL FOR JANUARY 1944

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ⁽¹⁾	1019.0	+0.8	18.3	-0.3	10.6	0.0	14.4	-0.2	34	+ 5
II.—Lower Egypt ...	1019.6	+0.7	19.0	-0.8	7.4	+0.6	13.2	-0.1	10	- 3
III.—Middle Egypt ...	1020.4	+1.0	19.0	-0.2	7.7	0.0	13.4	-0.1	3	- 2
IV.—Upper Egypt ...	1021.0	+1.4	19.9	-1.4	7.2	+0.1	13.6	-0.6	Drops	- 1
V.—Western Desert...	1022.2	+2.0	19.0	1.6	5.8	+0.2	12.4	-0.7	0	0
VI.—Red Sea (Egypt)...	1019.2	+1.2	21.1	-0.6	10.8	-0.2	16.0	-0.4	Drops	- 1
VII.—Red Sea (Sudan) ⁽²⁾	1016.3	+0.8	—	—	—	—	—	—	7	0
VIII.—North Sudan ...	1015.7	+0.5	29.5	-0.5	14.2	+1.3	21.8	+0.4	0	0
IX.—Central Sudan ...	1013.4	+0.1	32.5	-0.6	14.9	+1.7	23.7	+0.6	0	0
X.—South Sudan ...	1011.8	+0.8	36.4	+0.1	20.1	+1.5	28.2	+0.8	2	0

⁽¹⁾ Alexandria and Port Said. ⁽²⁾ P. Sudan only.

L. J. SUTTON,
Director, Meteorological Service.

State of the River

Lake Albert at Butiaba fell 20 cms. during the month. Its level on February 1st, 1944 was 15 cms. below the normal and about one metre below the level of the corresponding day of last year.

The Bahr el Jebel at Juba fell slightly during the month. Its levels were below both the normal and last year's throughout.

The River Sobat at Nasser continued its fall much below the normal levels until the 26th. A slight rise then occurred and was maintained to the 29th, when the level reached the normal, after which the river fell identically with the normal to the end of the month. The levels were a few cms. below last year's.

With the exception of the last few days of the month when the White Nile at Malakal showed a slight rise, the river fell steadily much below the normal and slightly below last year's levels throughout.

The Blue Nile at Roseires fell above normal levels and almost identical with last year's throughout the whole month. At Khartoum the levels were slightly below last year's but were much below the normal throughout.

On the Main Nile at Kajnarti, the River fell more rapidly than normal rate. The levels were about 80 cms. below the normal and about 20 cms. below those of last year

The difference of the mean levels in January 1944 from those of January 1943 and from the normal 1906-35 were :—

STATION	MEAN DIFFERENCE OF LEVELS	
	January 1944 minus January 1943	January 1944 minus Normal
	Metre	Metre
Butiaba *	— 0·97	— 0·15
Juba	— 0·41	— 0·22
Nasser †	— 0·06	— 0·75
Malakal	— 0·11	— 0·60
Roseires	0·00	+ 0·28
Khartoum	— 0·21	— 0·78
Kajnarti	— 0·23	— 0·84

* For February 1st, 1944.

† Nasser normal is for 1922-35 only.

Y. M. SIMAIKA,
Director, Hydrological Service.

Ministry of Public Works, Egypt.—Physical Department

REPORT ON THE WEATHER AND STATE OF THE RIVER FOR FEBRUARY 1944

The Weather

As is commonly the case at this time of the year, the weather of Egypt was affected by a series of depressions which traversed the Mediterranean, but this year they were of more frequent occurrence than usual.

At the beginning of the month the weather was rather cool with westerly winds, while there were light showers along the Mediterranean coast. On the morning of the 5th dense fog was widespread in Cairo area and the Delta; the wind then blew from the south and the weather became warmer.

Cool westerly winds arrived on the 8th reaching a velocity of 72 kilometres an hour at Alexandria, and heavy showers occurred in coastal regions; at Buseili 12 mms. and at Borollos 10 mms. were registered.

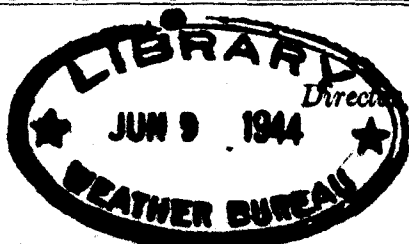
On the 15th a deep depression was centred over Cyrenaica giving rise to strong south-east and south winds throughout the western desert and Lower Egypt, with severe and widespread sandstorms, and the weather became much warmer. During the night of 15th-16th the temperature in Cairo did not fall below 17°C. (63°F.), or 9°C. above the normal for the time of the year, while at Alexandria the temperature did not fall below 19°C. (66°F.); this was the warmest night at Alexandria in any February for at least forty years. It is interesting to note that at 5 o'clock in the morning of the 16th, with a light wind from south-southeast, the temperature at Alexandria was 23°C. (73°F.). On the following day the temperature in Cairo rose to 28°C. (82°F.). On the 17th. the depression deepened and the whole of the eastern Mediterranean became an area of low pressure. South-westerly gales arose, and the weather rapidly became much cooler. The wind velocity at Alexandria reached 85 kilometres an hour and there were severe sandstorms throughout Egypt. Conditions improved considerably on the 19th, but on the following day Egypt again came under the influence of a Mediterranean depression and mild southerly winds prevailed but were of short duration, being succeeded by cool westerly winds bringing light scattered showers.

Egypt again came under the influence of an approaching depression on the 26th and a heat wave of unusual intensity for the time of the year resulted. Conditions were of the Khamsin type, with very dry southerly winds, the relative humidity in Cairo falling at times as low as 12 per cent. The peak of the heat wave was reached on the 28th, when the temperature in Cairo rose to 32°C. (90°F.) or 9°C. above normal.

For the month as a whole the mean barometric pressure was slightly above normal except on the Mediterranean coast, and the temperature slightly above normal in most districts. Rainfall was considerably below normal. Owing to the prevalence of southerly winds the air was much drier than usual, the relative humidity at Alexandria and Cairo averaging 10 per cent below the normal for the month.

DEPARTURE FROM NORMAL FOR FEBRUARY 1944

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1016.6	—0.2	19.6	+0.7	9.8	—0.7	14.7	0.0	4	— 17
II.—Lower Egypt ...	1017.4	+0.6	21.2	+0.6	7.0	0.0	14.1	+0.3	Drops	— 12
III.—Middle Egypt ...	1018.0	+0.4	22.1	+1.3	8.0	—0.4	15.0	+0.4	„	— 3
IV.—Upper Egypt ...	1018.2	+0.4	23.9	+0.6	7.4	—0.6	15.6	0.0	„	— 1
V.—Western Desert...	1019.0	+0.4	23.4	0.0	5.6	—0.4	14.5	—0.2	0	— 1
VI.—Red Sea ...	1016.5	+0.2	22.9	+0.5	11.0	—0.3	17.0	+0.1	0	— 1



L. J. SUTTON,
Director, Meteorological Service.

State of the River

Lake Albert at Butiaba fell 20 cms. during the month. Its level on March 1, 1944, was 24 cms. below the normal and one metre below the level of the corresponding day of last year.

The Bahr el Jebel at Juba fell slightly during the month. The levels were below both the normal and last year's throughout.

The River Sobat at Nasser resumed its fall slightly below the normal but almost identically with last year's levels.

The White Nile at Malakal fell below normal levels and slightly below last year's throughout. At Gebel Aulia, the reservoir had been kept at R.L. 377·20 metres holding its full capacity for the first time since its construction in 1937. Regulation for emptying started on the first of the month, and the D.S. levels rose steadily until the 10th, and remained almost steady to the end of the month.

The Blue Nile at Roseires continued to fall steadily above the normal levels but slightly below last year's throughout the month. At Khartoum the River reflected conditions D.S. Gebel Aulia.

During the first fortnight, the Main Nile at Kajnarti fell steadily below both the normal and last year's levels. On the 15th, when the level was about 1·50 metres below the normal, the contribution from Gebel Aulia Reservoir arrived and a sharp and steady rise set in. By the end of the month, the levels exceeded both the normal and last year's levels.

The difference of the mean levels in February 1944 from those of February 1943 and from the normal 1906-1935 were : —

STATION	MEAN DIFFERENCE OF LEVELS	
	February 1944 minus February 1943	February 1944 minus Normal
	Metre	Metre
Butiaba *	— 1·00	— 0·24
Juba	— 0·43	— 0·27
Nasser †	+ 0·02	— 0·03
Malakal	— 0·05	— 0·26
Roseires	— 0·05	+ 0·20
Khartoum	+ 0·11	+ 0·24
Kajnarti	— 0·10	— 0·90

* For February 1, 1944.

† Nasser normal is for 1922-35 only.

Y. M. SIMAIKA,
Director, Hydrological Service.

Ministry of Public Works, Egypt.—Physical Department

REPORT ON THE WEATHER AND STATE OF THE RIVER FOR MARCH 1944

The Weather

Changeable, with three heat waves of short duration; the outstanding feature was a prolonged period of very strong winds and severe sandstorms near the end of the month.

At the beginning of the month the approach of a depression along the eastern Mediterranean gave rise to southerly winds and Khamsin conditions. The temperature on the 2nd reached 35° C. (95° F.) in Cairo district and 36° C. (97° F.) at Port Said, the latter being 16° C. above the normal for the time of year. The air was very dry, the relative humidity in Cairo in the early afternoon falling as low as 7 per cent. The depression quickly passed and the arrival of northerly winds, which reached a velocity of 75 kilometres an hour at Helwan, brought a large and rapid fall in temperature, which did not exceed 22° C. (72° F.), in Cairo on the 3rd. Duststorms were widespread and were followed by light showers extending from the coast as far south as Qena.

A period of settled weather, with northeasterly winds and average temperatures followed, and persisted until the 11th, when Egypt again came under the influence of a depression and warm southerly winds with duststorms and Khamsin conditions were again experienced. By the 14th the heat wave had passed and a few scattered showers took place, with a thunderstorm at Damietta. On the 17th there were again light showers, and the weather remained cloudy and abnormally cool for some days. The maximum temperature in Cairo on the 19th was only 20° C. (68° F.). Subsequently the weather gradually became less cool, but light rain fell in Lower and Middle Egypt on the 21st.

On the 26th a depression appeared over Cyrenaica, and a complicated system of very low pressure, with conditions disturbed to a remarkable degree, soon developed over Egypt and the eastern Mediterranean. Easterly and southerly winds caused a rapid rise in temperature, which reached 36° C. (97° F.) in Cairo district, while the night (minimum temperature 21° C. or 70° F.) was the warmest night in March on record. The wind went round to the southwest in the morning of the 27th and rapidly increasing in strength reached 75 kilometres per hour at Helwan and 119 kilometres per hour at Alexandria during the evening. Such a high velocity at Alexandria has only once previously been recorded, viz in February 1908. The veering of the wind brought a very sharp fall in temperature and for the rest of the month the weather was abnormally cool. The southwesterly wind, especially on the afternoon of the 27th, was very dry, and unusually severe and prolonged sandstorms resulted, in many places the visibility being reduced at times to about a hundred metres or less. Conditions improved somewhat on the following day, but the wind was still very strong and carrying a large amount of sand and dust. Very light showers occurred in a few localities and by the morning of the 29th, a considerable improvement had taken place. During the storm the wind was so strong and the sandstorms so widespread and intense as to cause serious hindrance and danger to communications by land, sea and air throughout the whole eastern Mediterranean area. In northern Sinai roads and railway were blocked by drifts of sand. Contrasting with the heat wave of the 26th, the temperature in Cairo on the 30th did not exceed 20° C. (68° F.) or 7° C. below normal.

For the month as a whole the barometric pressure was everywhere much below normal, while temperature was slightly above. Rainfall was very small, in many places the showers which occurred producing immeasurably small amounts. Relative humidity at Alexandria and Cairo was below normal. Duration of sunshine, 9 hours a day in Alexandria and Cairo, was normal.

DEPARTURE FROM NORMAL FOR MARCH 1944

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1014.2	—1.7	21.4	+0.7	12.2	—0.1	16.8	+0.3	4	—7
II.—Lower Egypt ...	1014.4	—1.9	23.8	—0.1	9.2	+0.2	16.5	0.0	1	—5
III.—Middle Egypt ...	1014.5	—1.8	25.1	+0.9	10.8	+0.3	18.0	+0.6	Drops	—4
IV.—Upper Egypt ...	1013.9	—2.0	28.1	+0.2	11.7	+0.7	19.9	+0.4	„	0
V.—Western Desert...	1014.8	—1.9	27.5	—0.1	10.0	+0.2	18.8	0.0	0	0
VI.—Red Sea ...	1013.3	—1.3	25.5	+0.6	14.5	+0.4	20.0	+0.5	1	0

L. J. SUTTON,
Director, Meteorological Service.

State of the River

Lake Albert at Butiaba was almost steady during the month. Its level on April 1st, 1944, was 26 centimetres below the normal and 87 centimetres below the level of the corresponding day of last year.

With the exception of the last day of the month when the Bahrel Jebel at Juba recorded a rise of 60 centimetres, the levels were on general almost steady and much below both the normal and last year's throughout.

The River Sobat at Nasser fell until the 22nd when the level was about 20 centimetres below the normal, a steady rise—due to early spring rains—then set in and by the end of the month, the level rose to about half a metre above the normal. The levels in general were a few centimetres below those of last year.

The White Nile at Malakal continued its fall during the first twenty days of the month and was steady thereafter. The levels were below both the normal and last year's. At Gebel Aulia emptying of the Reservoir was continued, and by the end of the month there was about 600 mills M³ including the backwater effect in the Reservoir. The D.S. levels were almost steady during the month.

The Blue Nile at Roseires fell almost normally and below last year until the 23rd when the discharge was not more than 8 millions M³ per day. It rose steadily thereafter reaching to a peak on the 28th which was 43 centimetres above the normal with a discharge of 12 millions M³ per day. The river fell slightly thereafter to the end of the month. At Khartoum the levels being affected by regulation on Gebel Aulia Reservoir, were almost steady throughout the month.

Owing to the contribution from Gebel Aulia the levels of the Main Nile at Kajnarti were more than 60 centimetres above the normal and well above those of last year throughout the whole month.

The difference of the mean levels in March 1944 from those of March 1943 and from the normal 1906-1935 were :

STATION	MEAN DIFFERENCE OF LEVELS	
	March 1944 minus March 1943	March 1944 minus Normal
	Metre	Metre
Butiaba *	— 0·87	— 0·26
Juba	— 0·43	— 0·32
Nasser †	+ 0·02	— 0·07
Malakal	— 0·09	— 0·19
Roseires	— 0·02	+ 0·12
Khartoum	+ 0·10	+ 0·39
Kajnarti	+ 0·16	+ 0·62

* For April 1, 1944.

† Nasser normal is for 1922-35 only.

Y. M. SIMAIKA,
Director, Hydrological Service.

Ministry of Public Works, Egypt.—Physical Department

REPORT ON THE WEATHER AND STATE OF THE RIVER FOR APRIL 1944

The Weather

With the exception of four days, unusually cool for the first eighteen days of the month, and abnormally warm during the last ten days.

The month opened with warm southerly winds, but early in the morning of the second they veered to north-west and the weather became much cooler, so that the day temperature, which reached 33°C. (91F°.) in Cairo on the first, did not exceed 21°C. (70F°.) on the 4th. On the 6th a shallow depression appeared west of the Delta and gave rise to mild easterly and southerly winds throughout Egypt, but by the next morning it had reached the coast of Palestine, and a spell of cool north-westerly winds set in, while light showers occurred throughout Lower Egypt on the 8th.

Egypt again came under the influence of a small depression on the 11th, bringing warmer weather, but this passed by the following day and cool north-westerly winds followed.

On the 15th a depression was situated over the eastern Mediterranean and warm southerly winds prevailed, but the depression passed during the evening and a sharp fall of temperature followed.

Skies were generally overcast on the 16th and light showers were widespread.

High pressure was subsequently established over Egypt, resulting in north-easterly winds and a large rise in temperature. At times the wind was very strong, reaching a velocity of 80 kilometres an hour at Helwan during the nights of the 19th and 20th. Morning mists occurred in many places in the Delta on the 18th. The peak of the heat wave was reached on the 26th and 27th, when temperatures exceeded the normal by 10 or 11°C. in several localities. The highest temperatures recorded were 41°C. (106°F) in Cairo and 45°C. (113°F.) at Qena, Luxor and Aswan. During this period the Mediterranean coast, under the influence of winds from the sea, escaped the full effects of the heat wave. On the 28th winds veered to the north-west, accompanied by an appreciable fall in temperature.

On the following day Egypt was affected by a depression which approached along the coast, and by the morning of the 30th winds were southerly; early in the afternoon however they veered rapidly to the north-west, and there were light showers throughout Lower Egypt. During the evening the wind reached a velocity of 70 kilometres an hour at Helwan.

For the month as a whole the barometric pressure was everywhere above normal, though not by large amounts, and the temperature slightly above normal, except along the Mediterranean coast, where it was normal. Although there were several showers, in most places they were very light and rainfall was almost negligible.

DEPARTURE FROM NORMAL FOR APRIL 1944

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1015.0	+0.8	23.8	+0.2	14.8	+0.2	19.3	+0.2	1	—3
II.—Lower Egypt ...	1015.0	+0.4	28.1	+0.3	12.0	+0.2	20.0	+0.2	0	—4
III.—Middle Egypt ...	1014.9	+0.6	30.1	+1.6	13.8	+0.4	22.0	+1.0	Drops	—2
IV.—Upper Egypt ...	1014.0	+0.5	33.6	+1.0	15.6	+0.4	24.6	+0.7	,,	0
V.—Western Desert...	1015.2	+0.9	32.5	+0.1	14.3	+0.5	23.4	+0.3	,,	0
VI.—Red Sea ...	1013.1	+0.8	28.2	+0.1	17.6	+0.3	22.9	+0.2	,,	0

L. J. SUTTON,

Director, Meteorological Service.

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WEAT

State of the River

Lake Albert at Butiaba fell 6 cms. during the month. Its level on May 1, 1944, was 31 cms. below the normal and 87 cms. below the level of the corresponding day of last year.

The Bahr el Jebel at Juba started the month with a heavy fall after which the levels were almost steady throughout and were much below both the normal and last year's.

On the River Sobat at Nasser the rise which started before the end of last month continued until the 5th when the level was much above both the normal and last year's. The levels then fell almost steadily to the end of the month when the level was again below both the normal and last year's.

On the White Nile at Malakal the river continued to rise until the 9th and then fell to the end of the month. The levels were on the average almost identical with both the normal and those of last year. At Gebel Aulia regulation for emptying the Reservoir ceased on the 24th. when all sluices of the dam were fully open, the D.S. gauges falling rapidly thereafter.

After the rise which set in on the beginning of the month when the Blue Nile at Roseires was well above the normal and last year's level, the River fell almost steadily until the 16th and resumed rising thereafter with slight fluctuations to the end of the month. The levels were, as a whole, a few zentimettes above both the normal and last year's. At Khartoum the river followed conditions prevailing D.S. Gebel Aulia.

The Main Nile at Kajnarti fell almost steadily until the 19th and rose there after till the end of the month due to spring rains which fell in the upper regions by the end of last month. The levels were much above the normal and on the average about 20 cms. above last year's levels.

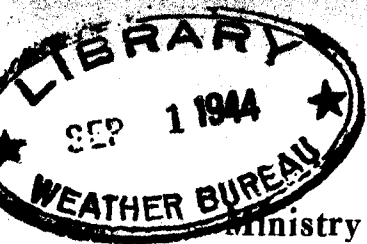
The difference of the mean levels in April 1944 from those of April 1943 and from the normal 1906-35 were :—

STATION	MEAN DIFFERENCE OF LEVELS	
	April 1944 minus April 1943	April 1944 minus Normal
	<i>Feet</i>	<i>Metre</i>
Butiaba *	— 0·87	— 0·31
Juba	— 0·42	— 0·35
Nasser †	+ 0·20	— 0·06
Malakal	+ 0·03	+ 0·03
Roseires	+ 0·05	+ 0·12
Khartoum	+ 0·19	+ 0·19
Kajnarti	+ 0·21	+ 0·81

* For May 1, 1944.

† Nasser normal is for 1922-35 only.

Y. M. SIMAIKA,
Director, Hydrological Service.



REPORT ON THE WEATHER AND STATE OF THE RIVER FOR MAY 1944

The Weather

Abnormally cool during the first and last weeks; heat wave on 22nd and 23rd. At Helwan, the coolest May since 1919; at Giza the coolest since 1932.

At the beginning of the month the weather was cool and unsettled to an unusual extent. Light thunderstorms and showers occurred in many localities, from the Mediterranean coast to as far south as Wadi Halfa, and throughout the eastern desert to the northern Red Sea.

The weather was particularly cold for the time of year on the 4th and 5th, when the temperature in Cairo did not exceed 24° C. (75° F.) or 8° C. below the normal, while at Aswan, Kharga and Dakhla the maximum temperature was as much as 10° or 11° below the normal. Rainstorms, many accompanied by thunder, were especially severe on the 4th; the largest amounts registered were 30 mms. at Sirw, 28 mms. at Port Said (the highest recorded on any day in May; the records for this station go back to 1887) and 13 mms. at Helwan. At many places the wind, blowing from the north, frequently reached gale force; it attained a velocity of 70 kilometres per hour at Helwan on the 4th. Even in Upper Egypt the rainstorms during this period were heavy, 10 mms. being registered at Barramia and 5 mms. at Aswan.

After the 5th the spell of cool weather gradually became less intense under the influence of northeasterly winds, often of gale force, and by the 8th the temperature had risen to normal. Light rain fell in Cairo district on the 10th.

On the 14th a shallow depression appeared off Cyrenaica and by the following day had reached the eastern Mediterranean, causing southerly winds and warm weather in Egypt. The temperature in Cairo on that day rose to 38° C. (100° F.). The depression passed in the evening and the wind veering to northwest brought a sharp fall in temperature, and for some days the weather remained cool.

Egypt again came under the influence of a depression on the 22nd, and hot southeasterly winds resulted. On the following day, when the depression was passing off the coast of the Delta, the temperature at Alexandria rose to 40° C. (104° F.) or 13° C. above normal, while in Cairo (Giza) it reached 45° C. (113° F.) or 12° C. above normal. The depression then passed very rapidly to northern Iraq, and with the arrival of northwesterly winds in its rear a remarkable fall of temperature ensued, to such an extent that by the 27th the temperature in Cairo did not rise above 28° C. (82° F.), and for the last five days of the month temperatures remained 6° or 7° C. below normal in most districts.

For the month as a whole the barometric pressure was everywhere much above normal, and the temperature below. Rainfall is usually negligible in May, but heavy isolated storms occasionally occur. The first few days of this month however were quite exceptional in the frequency and extent of the showers. Duration of sunshine at Giza averaged 11.5 hours per day compared with a normal value of 11.0 hours.

DEPARTURE FROM NORMAL FOR MAY 1944

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1015.0	+1.6	25.1	—0.7	17.1	—0.4	21.1	—0.6	10	+8
II.—Lower Egypt ...	1014.8	+1.1	29.6	—1.8	14.6	—0.6	22.1	—1.2	Drops	—2
III.—Middle Egypt ...	1014.8	+1.8	31.0	—1.5	16.2	—0.8	23.6	—1.2	4	+3
IV.—Upper Egypt ...	1013.1	+1.3	34.7	—1.5	18.7	—0.7	26.7	—1.1	1	+1
V.—Western Desert...	1015.2	+2.4	33.9	—2.7	17.6	—0.8	25.8	—1.8	Drops	0
VI.—Red Sea ...	1011.4	+0.6	30.9	—0.5	21.2	0.0	26.0	—0.2	„	Drops

L. J. SUTTON,
Director, Meteorological Service.

State of the River

Lake Albert at Butiaba rose 6 cms. during the month. Its level on June 1, 1944, was 30 cms. below the normal and 92 cms. below the level of the corresponding day of last year.

At Juba on the Bahr el Jebel two big flushes were recorded on the 6th and the 13th, the latter exceeding both the normal and last year's. The levels were on the whole below the normal and last year's throughout.

By the beginning of the month, the River Sobat at Nasser started to rise at an abnormally fast rate and reached a peak on the 15th when the level was more than one metre above the normal. After remaining steady for a few days the levels fell slightly till the 22nd then started to rise again to the end of the month. The levels were on the whole much above both the normal and last year's.

The rise which set in the River Sobat was transmitted some days later at Malakal. The River which was almost steady in the first decade, rose rapidly during the second and then slightly until the end of the month. After the tenth the levels were well above both the normal and last year's.

At Roseires on the Blue Nile, a series of flushes were recorded during the month. The highest was that on the 11th when the level was one metre above the normal, and the corresponding discharge more than 50 mills. cubic metre day. The levels were in general about half a metre above the normal and last year's. A few days later the river at Khartoum reflected the same features which occurred at Roseires. The level which was much below normal and almost identical with last year's during the first fortnight rose steadily to a peak on the 19th when it was much above the normal and that of last year. The levels then fluctuated slightly until the end of the month.

With the exception of the rise on the last two days, the Main Nile at Kajnarti fell almost steadily throughout the month. The levels were as a whole a few cms. below the normal but well above those of last year.

STATION	MEAN DIFFERENCE OF LEVELS	
	May 1944 minus May 1943	May 1944 minus Normal
	Metre	Metre
Butiaba *	- 0.92	- 0.30
Juba	- 0.28	- 0.26
Nasser †	+ 1.18	+ 0.61
Malakal	+ 0.25	+ 0.22
Roseires	+ 0.57	+ 0.55
Khartoum	+ 0.19	- 0.12
Kajnarti	+ 0.22	- 0.03

* Butiaba for June 1st, 1944.

† Nasser normal is for 1922-35 only.

Y. M. SIMAIKA,
Director, Hydrological Service.

Ministry of Public Works, Egypt.—Physical Department

REPORT ON THE WEATHER AND STATE OF THE RIVER FOR JUNE 1944

The Weather

The khamsin type of weather persisted to a later date than usual ; three heat waves.

The abnormally cool weather experienced during the last week of May continued for a few days into June, but on the 5th. Egypt came under the influence of a depression which approached along the coast from Tripoli, and with easterly winds prevailing the weather became steadily warmer. By the 7th., winds were generally from the south and temperatures rose to 9° or 10° C above normal, 45° C (113° F) at Giza, and 48° C (118° F) at many places in Upper Egypt being registered on that day. The depression passed during the evening and the arrival of northwest winds brought a rapid fall in temperature, which however remained above normal.

Conditions were disturbed on the 10th. and 11th. when the presence of a shallow depression over Upper Egypt resulted in light thunderstorms and showers in Cairo district and the eastern part of the Delta.

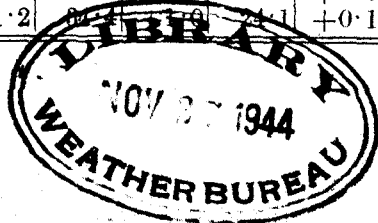
On the 13th. a depression appeared over the western desert, and with winds blowing from the east the temperature in Cairo rose to 41° C (106° F). The air was extremely dry and for several hours in the middle of the day the relative humidity in Cairo remained well below 10 %, falling to 6 % at 10 o'clock in the morning . The heat wave rapidly weakened and by the 16th. under the influence of westerly winds, temperatures were slightly below normal in most districts, for the first time for nearly a fortnight.

On the 20th. a depression was situated over Cyrenaica, crossing the northern Delta on the following day, and resulting in southerly winds and moderate khamsin conditions. The temperature in Cairo district rose to 44° C (111° F) but in the evening a strong west wind, reaching a velocity of 66 kilometres an hour at Helwan, arrived accompanied by a line dust storm, and the heat wave broke. During the last few days of the month the weather was generally cooler than usual.

For the month as a whole, barometric pressure was everywhere much below normal, while temperature was above normal, particularly in Middle and Upper Egypt. At Aswan a temperature of 48°C was recorded on five days, the normal being 42° C. Relative humidity at Alexandria was below normal on 14 days, but continuously above during the last 9 days. In Cairo humidity was below normal on 20 days, being 8 % below the normal for the month as a whole. Sunshine at Giza averaged 12.3 hours per day, — the normal amount. Throughout the Sudan, rainfall was below normal, especially in the Extreme South.

DEPARTURE FROM NORMAL FOR JUNE 1944

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1010.3	—1.9	28.6	+0.6	20.7	+0.3	24.6	+0.4	1	+1
II.—Lower Egypt ...	1010.2	—1.8	34.4	+0.6	19.0	+0.9	26.7	+0.8	Drops	0
III.—Middle Egypt ...	1009.9	—1.7	36.5	+1.5	20.6	+1.0	28.6	+1.2	„	0
IV.—Upper Egypt ...	1008.6	—1.5	40.1	+1.7	22.8	+0.8	31.4	+1.2	0	0
V.—Western Desert...	1010.6	—1.0	39.4	+0.6	22.3	+0.8	30.8	+0.7	0	0
VI.—Red Sea ...	1007.3	—1.2	37.4	+1.0	24.1	+0.1	29.2	+0.6	0	0



RAINFALL (M/MS) JUNE 1944

Station	1944	Diff. From Normal
Juba	77	— 58
Wau	172	+ 6
Malakal	64	— 64
El-Obeid	35	— 2
El-Fasher	2	— 14
Khartoum	5	— 4
Addis Ababa	72	— 62
Roseires	17	—112
Wad Medani	19	— 14
Atbara	0	— 2
Kassala	0	— 30
Port Sudan... ..	2	+ 2

L. J. SUTTON.

Director, Meteorological Service.

State of the River

Lake Albert at Butiaba fell 10 cms. during the month. Its level on July 1st., 1944 was 43 cms. below the normal and 97 cms. below the level of the corresponding day of last year.

The Bahr El-Jebel at Juba fluctuated slightly during the month. The levels were much below the normal and last year's throughout.

The River Sobat at Nasser continued to rise steadily throughout the month at almost normal rate. The levels, were well above the normal and on the average more than one metre above those of last year.

The white Nile at Malakal showed the same features which occurred at Nasser. The levels were above both the normal and last year's throughout.

During the month, flood conditions were established in the Blue Nile. At Roseires three prominent peaks gradually increasing in height were recorded, the highest was that on the 28th. when the level was more than one metre above both normal and last year's. The levels were as a whole about 30 cms. above the normal and about one metre above last year's levels. At Khartoum the River fluctuated during the month and the levels were a little below the normal but much above last year's.

On the River Atbara, Khashm El-Girba gauge records started on the 14th. and the river fluctuated violently thereafter but no significant discharge passed the month at Atbara till the end of the month.

The Main Nile at Kajnarti started the month by a rapid rise which was maintained until the 4th. when the level was well above the normal and last year's, the river fell slightly thereafter until the 13th. then rose again almost indentially with the normal till the end of the month. The levels were much above those of last year throughout.

The difference of the mean levels in June 1944 from those of June 1943 and from the normal 1906 1935 were :—

STATION	MEAN DIFFERENCE OF LEVELS	
	June 1944 minus June 1943	June 1944 minus Normal
	Metre	Metre
Butiaba *	— 0·97	— 0·43
Juba	— 0·67	— 0·50
Nasser †	+ 1·26	+ 0·49
Malakal	+ 0·47	+ 0·28
Roseires	+ 0·98	+ 0·31
Khartoum	+ 0·69	— 0·12
Kajnarti	+ 0·68	+ 0·10

* Butiaba for July 1st, 1944.

† Nasser normal is for 1922-35 only.

M. GHABRIAL,

A./Director, Hydrological Service.

Ministry of Public Works, Egypt.—Physical Department

REPORT ON THE WEATHER AND STATE OF THE RIVER FOR JULY 1944

The Weather

A relatively cool spell in the middle of the month ; otherwise small departures from average conditions.

The pressure distribution was generally of the settled summer type throughout the month. During the first week the weather was somewhat warmer than usual, and on the 6th. the temperature in Cairo reached 40° C (104° F). On the 13th. a cool spell began and lasted for over a week, with temperatures by day 3 or 4° C below normal in some places, and there was a comparatively large amount of low cloud. A short heat wave occurred on the 24th. and 25th., when the temperature in Cairo district reached 41° C (106° F) or 6° C above the normal, while the air was stagnant and oppressive. On the following day, with the arrival of fresh northwesterly winds, the heat wave rapidly weakened and for the rest of the month the weather was slightly cooler than usual.

For the month as a whole the barometric pressure was everywhere above normal, though only by small amounts. In all districts the temperature was about average. Both at Alexandria and in Cairo district the relative humidity was about normal. Duration of sunshine at Giza averaged 12.3 hours per day. Rainfall in the central and southern Sudan was generally normal or slightly above.

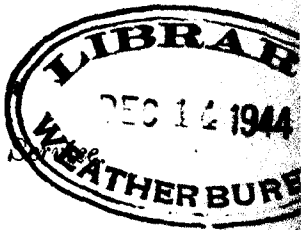
DEPARTURE FROM NORMAL FOR JULY 1944

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1009.6	+0.4	29.5	+0.1	22.7	+0.3	26.1	+0.2	0	0
II.—Lower Egypt ...	1009.4	+0.3	33.7	—0.7	20.2	+0.5	27.0	—0.1	0	0
III.—Middle Egypt ...	1009.5	+0.5	35.8	+0.1	21.5	+0.3	28.6	+0.2	0	0
IV.—Upper Egypt ...	1008.3	+0.3	38.5	0.0	22.9	—0.2	30.7	—0.1	0	0
V.—Western Desert...	1010.6	+1.0	38.7	—0.3	22.7	+0.5	30.7	+0.1	0	0
VI.—Red Sea ...	1006.6	+0.4	34.3	+0.1	25.0	0.0	29.6	0.0	0	0

RAINFALL IN (M/MS) JULY 1944

Station	1944	Diff. From Normal
Juba	245	+123
Wau	214	+ 24
Malakal	183	+ 11
El-Obeid	117	+ 19
El-Fasher	55	— 51
Khartoum	98	+ 45
Addis Ababa	260	— 14
Roseires	125	— 62
Wad Medani	268	+136
Atbara	41	+ 23
Kassala	1	— 90
Port Sudan... ..	39	+ 33

L. J. SUTTON.
Director, Meteorological



State of the River

Lake Albert at Butiaba fell 3 cms. during the month. Its level on August 1st, 1944 was 48 cms. below the normal and 96 cms. below the level of the corresponding day of last year.

With the exception of a single flush on the 11th. the Bahr el Gebel at Juba fluctuated much below the normal and last year's levels throughout.

The River Sobat at Nasser rose at less than normal rate during the month. The level which was 24 cms. above the normal at the beginning of the month was 11 cms. below it at its end. The levels were much above last year's throughout.

The White Nile at Malakal rose well above both the normal and last year's. At Gebel Aulia re-regulation for the first filling of the Reservoir started on the 14th, no discharge from the White Nile was passed after the 20th.

The Blue Nile at Roseires rose during the month with the usual characteristic flushes. The level were as a whole above the normal and last year's. At Khartoum the river fluctuated below the normal until the 10th. and rose steadily until the end of the month.

Violent fluctuations, were the outstanding feature of the River Atbara at Khashm el Girba throughout the month. The levels were on general below the normal and almost identical with last year's.

The Main Nile at Kajnarti rose almost identically with the normal during the whole month and the levels were about 1.5 metres above last year's throughout.

As last year the Aswan Reservoir was fully emptied out which caused a stoppage of navigation between Halfa and Shellal from the 15th, th the 29th of the month.

The difference of the mean levels in July 1944 from those of July 1943 and from the normal 1906 to 1935 were :

STATION	MEAN DIFFERENCE OF LEVELS	
	July 1944 minus July 1943	July 1944 minus Normal
	Metre	Metre
Butiaba *	- 0.96	- 0.48
Juba	- 0.49	- 0.40
Nasser †	+ 0.43	+ 0.03
Malakal	+ 0.29	+ 0.15
Roseires	+ 0.60	+ 0.40
Khartoum	+ 0.28	- 0.27
K. el Girba	+ 0.02	- 0.27
Kajnarti	+ 1.42	- 0.07

* Butiaba for July 1st, 1944.

† Nasser normal is for 1922-35 only.

Y. M. SIMIKA,
Director, Hydrological Service.

Ministry of Public Works, Egypt.—Physical Department

REPORT ON THE WEATHER AND STATE OF THE RIVER FOR AUGUST 1944

The Weather

The chief feature was the occurrence of phenomenal thunder-storms with heavy rain in the northern part of the Delta during the last week.

Normal conditions prevailed during the first few days of the month. There was a relatively cool spell from the 6th to the 10th, with temperatures about 3° C. below average. From the 11th to the end of the third week the weather was of the usual settled summer type with small departures from average conditions; the sky was frequently overcast in the early mornings, and drops of rain fell near Cairo on the 14th.

On the 24th the presence of a small depression near the coast in the west caused southerly winds in Egypt,—rare in August—and the weather became much warmer, the temperature near Cairo reaching 39° C. (102° F.), while at Asyût 44° C. (111° F.) was recorded on the following day. The warm spell continued and conditions throughout the coastal areas of the South-east Mediterranean became disturbed to a remarkable extent. From the 26th to the 29th there were heavy rainstorms throughout Cyrenaica, at a time of year which is usually rainless. Light showers occurred at Mersa Matruh and near Alexandria on the 27th.

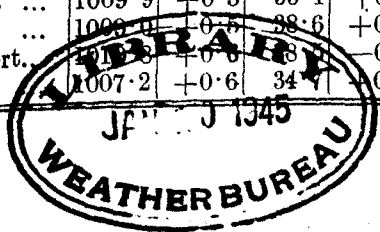
In the afternoon of the 28th southerly winds prevailed from Upper Egypt to the southern part of the Delta, while throughout the Delta the winds were mainly north-easterly. Thunder-storms of remarkable intensity, accompanied in places by westerly winds of gale force and by severe hail-storms, some of the hailstones exceeding five centimetres in diameter, passed over the northern part of the Delta in the early evening. Considerable damage from the wind, rain and hail was reported. The rain was especially heavy near Sakha, where 40 mms. were registered in half an hour; at Kafr el Sheikh 35 mms. of rain fell in forty minutes. Other places with heavy rain were Damanhur with 20 mms., Belqas with 18, Mex and Sirw with 14, and Alexandria with 10 mms., although at very few stations did the duration of the storm exceed half an hour. Scattered showers of less severity also occurred on the following day, with 5 mms. of rain at Alexandria and Sirw. No rain is reported as having fallen to the south of Tanta.

Since rain in August is extremely rare it is of interest to note that until this year rain had fallen at Alexandria in August on only two occasions in the last sixty years, and apart from 11 mms. at Mersa Matruh in 1926, the largest amount recorded in August at any station in Egypt previous to this year was only two millimetres; this was registered at Alexandria in 1907.

For the month as a whole the barometric pressure was everywhere slightly above normal; the temperature was slightly below normal in Lower Egypt, normal in Middle Egypt and slightly above in Upper Egypt. Relative humidity in Alexandria and Cairo was about normal. Rainfall in the Sudan was much below normal in most districts.

DEPARTURE FROM NORMAL FOR AUGUST 1944

	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1010.2	+0.4	29.9	—0.3	22.8	—0.3	26.4	—0.3	3	+3
II.—Lower Egypt ...	1009.9	+0.1	33.6	—0.8	20.3	+0.2	27.0	—0.3	5	+5
III.—Middle Egypt ...	1009.9	+0.3	35.4	+0.3	21.4	—0.2	28.4	0.0	0	0
IV.—Upper Egypt ...	1008.9	+0.5	38.6	+0.5	23.0	—0.2	30.8	+0.2	0	0
V.—Western Desert ...	1008.8	+0.6	38.8	—0.4	22.6	+0.8	30.6	+0.2	0	0
VI.—Red Sea ...	1007.2	+0.6	34.7	—0.1	25.2	—0.4	30.0	—0.2	0	0



- 2 - RAINFALL IN (MMS) AUGUST 1944

Station	1944	Diff. From Normal
Juba	124	- 7
Wau	236	+ 25
Malakal	187	+ 4
El-Obeid	66	- 57
El-Fasher	114	- 18
Khartoum	7	- 67
Addis Ababa	307	+ 20
Roseires	157	- 61
Wad Medani	63	- 80
Atbara	9	- 30
Kassala	36	- 90
Port Sudan... ..	drops	- 3

L. J. SUTTON,
Director, Meteorological Service.

State of the River

Lake Albert at Butiaba rose 7 centimetres. Its level on September 1, 1944, was 48 centimetres below the normal and 93 centimetres below the level of the corresponding day of last year.

With the exception of a flush on the 4th which brought the level up to the normal on that date, the Bahr el Jebel at Juba, fluctuated much below the normal and last year throughout the month.

The River Sobat at Nasser continued its rise at less than normal rate. The levels which were below the normal throughout the month, were above those of last year until the 18th, and almost identical with them for the rest of the month.

At Malakal, the White Nile rose at less than normal rate. The levels which were a little above both the normal and last year's for the first fortnight were almost identical with them during the remainder of the month.

The Blue Nile at Roseires fluctuated about the normal during the first 10 days. A fall then set in which brought the level about 1·16 metres below the normal on the 13th. The river rose sharply afterwards with the usual fluctuations recording two peaks of 20·04 metres on the 18th and 20·35 metres on the 28th. The level then fell steadily till the end of the month when it was about 60 centimetres below the normal.

At Khartoum the river repeated the same features a few days later.

The river Atbara at Khashm el Girba has been well below both the normal and last year. It rose with small fluctuations until the 7th, then fell until the 13th. It then rose again reaching the normal on the 27th and 28th, then fell sharply until the end of the month when its level was 82 cms. below normal and 1·90 metres below last year.

At Kajnarti the River rose at almost normal rate until the 10th, kept steady for 8 days, dropped a little then rose again at faster than normal rate. By the end of the month it was a little above normal but lower than last year.

To facilitate the navigation through the lock, the Aswan Reservoir was maintained at 99·50 from the 3rd till the end of the month.

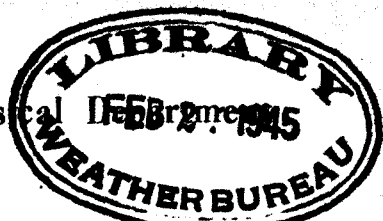
The difference of the mean levels in August 1944 from those of August 1943 and from the normal 1906-35 were :—

STATION	MEAN DIFFERENCE OF LEVELS	
	August 1944 minus August 1943	August 1944 minus Normal
	Metre	Metre
Butiaba *	- 0·93	- 0·48
Juba	(- 0·59	- 0·60)
Nasser †	+ 0·11	- 0·16
Malakal	+ 0·08	+ 0·01
Roseires	- 0·47	- 0·06
Khartoum	- 0·04	- 0·39
Khashm el Girba	- 0·79	- 0·53
Kajnarti	+ 0·36	- 0·02

* For August 1st, 1944.

† Nasser normal is for 1922-35 only.

Y. M. SIMIKA,
Director, Hydrological Service



REPORT ON THE WEATHER AND STATE OF THE RIVER FOR SEPTEMBER 1944

The Weather

Rather warm during the first half and cooler than usual during the second half of the month.

Normal summer conditions prevailed for the greater part. Morning mists occurred in the eastern Delta and in Cairo district on the 5th. and 6th., and the weather was rather warm and damp for several days.

On the morning of the 16th. a small depression was situated off Mersa Matruh, and rain fell along the coastal strip in the west of Egypt, 5 millimetres being recorded at Matruh. Cool air from the northwest then arrived in Egypt, causing a pronounced fall in the temperature and a large amount of low cloud, while on the 20th. there were light showers in Alexandria and Port Said districts. The temperature was then generally 3-4 °C below the average for the time of year. Subsequently the winds became northeasterly and the temperature gradually rose to normal. During the last few days there were again morning mists in Cairo district. On the 28th. and 29th. the wind at Helwan reached a velocity of 60 kilometres per hour from the northeast.

For the month as a whole the barometric pressure was everywhere slightly above normal, and the temperature and relative humidity approximately normal. Duration of sunshine at Giza averaged 10.5 hours per day. Rainfall in the Sudan was below normal except in the south, where it was well above.

DEPARTURE FROM NORMAL FOR SEPTEMBER 1944

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1013.6	+0.8	29.6	+0.2	22.2	+0.1	25.9	+0.2	1	+1
II.—Lower Egypt ...	1013.6	+0.3	31.8	—0.8	18.8	+0.3	25.3	—0.2	0	0
III.—Middle Egypt ...	1013.4	+0.5	32.7	+0.2	20.0	+0.2	26.4	+0.2	0	0
IV.—Upper Egypt ...	1012.0	+0.5	35.9	+0.5	21.2	0.0	28.6	+0.2	0	0
V.—Western Desert...	1014.1	+0.8	35.3	—0.9	19.7	—0.2	27.5	—0.6	0	0
VI.—Red Sea (Egypt).	1009.8	+0.2	32.2	—0.3	23.6	—0.2	27.9	—0.2	0	0

RAINFALL IN (M/MS) FOR SEPTEMBER 1944

Station	1944	Diff. From Normal
Juba	164	+ 59
Wau	266	+ 99
Malakal	126	— 8
El-Obeid	85	+ 12
El-Fasher	25	— 6
Khartoum	8	— 11
Addis Ababa	153	— 35
Roseires	165	+ 15
Wad Medani	28	— 29
Atbara	2	— 4
Kassala	31	— 27
Port Sudan... ..	0	0

L. J. SUTTON,
Director, Meteorological Service.

State of the River

Lake Albert at Butiaba rose 3 centimetres during the month. Its level on October 1st, 1944, was 53 centimetres below the normal and 88 centimetres below the corresponding day of last year.

The Bahr el Jebel at Juba fluctuated during the whole month. The levels were on the average, about 60 centimetres below both the normal and last year.

The River Sobat at Nasser rose gradually almost at normal rate during the whole month, the levels were below the normal and nearly similar to those of last year.

The White Nile at Malakal rose at less than normal rate during the month. The levels were slightly above those of last year and below the normal throughout.

Since reaching its maximum peak on the 28th. of August the Blue Nile at Roseires fell sharply until the 5th. of September when the level was about 1.50 metres below the normal and 2.85 metres below that of last year. It fluctuated thereafter showing two peaks on the 12th. and 21st. when the levels were about the normal and those of last year. After the 21st. it fell sharply again till the end of the month. The levels were on the average below both the normal and those of last year. At Khartoum the Blue Nile repeated the same features which was recorded at Roseires.

The River Atbara at Khashm el Girba fell sharply until the 8th. when the level was 1.70 metres below the normal and 2.00 metres below that of last year: it fluctuated thereafter below both the normal and last year's levels. On the average levels were 0.91 metres below the normal and 1.65 metres below last year's levels.

The main Nile at Kajnarti fell sharply until the 18th. of the month when the level was 1.70 metres below the normal and 3.25 metres below that of last year. The levels were on the whole below both the normal and those of last year throughout the month.

A remarkable feature of the month was the unprecedented collapse of the flood in the early days. This would have entailed the loss of the command level at Esna Barrage by the middle of the month had not storage been provided for in the Aswan Reservoir to meet this contingency.

The difference of the mean levels in September 1944 from those of September 1943 and from the normal 1906-1935 were :—

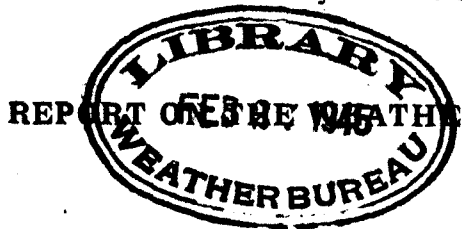
STATION	MEAN DIFFERENCE OF LEVELS	
	September 1944 minus September 1943	September 1944 minus Normal
	Metre	Metre
Butiaba *	— 0.88	— 0.53
Juba	— 0.57	— 0.61
Nasser †	+ 0.03	— 0.27
Malakal	+ 0.08	— 0.04
Roseires	— 0.98	— 0.59
Khartoum	— 0.70	— 0.94
Khashm el Girba	— 1.65	— 0.91
Kajnarti	— 1.88	— 1.08

* For October 1st, 1944.

† Nasser normal is for 1923-35 only.

Y. M. SIMAIKA,
Director, Hydrological Service.

Ministry of Public Works, Egypt.—Physical Department



REPORT ON THE WEATHER AND STATE OF THE RIVER FOR OCTOBER 1944

The Weather

Slightly warmer than usual, with four heat waves. Thunderstorms in Upper Egypt at the end of the month.

At the begining of the month Egypt was an area of high pressure with northeasterly winds; by the 3rd. the winds had veered to the west, causing a fall in temperature, and light showers near the coast. Anticyclonic conditions with northeasterly winds followed but by the 12th. Egypt came under the influence of a shallow depression over the Mediterranean and the weather became much warmer, the temperature in Cairo district reaching 36° C (97° F).

A rapid fall in temperature took place with the arrival of northwesterly winds on the following day.

On the 15th. a depression was situated near Crete and warm southerly winds prevailed in Egypt, the temperature in Cairo district, on the following day reaching 38° C (100° F) or 8° C above the normal for the time of year. The passage of the depression in the evening brought cool air from the northwest, and showers of rain occurred throughout Lower Egypt but were everywhere light.

The weather remained cool for a few days. On the 21st. a deep depression was centred off Mersa Matruh, and southerly winds prevailing the weather again became warm, but by the following day the depression had passed and the temperature fell considerably. Settled weather with northeasterly winds followed.

From the 27th. to the end of the month Upper Egypt and the northern Red Sea were an area of low pressure. Winds in Lower Egypt were mainly easterly and the weather was very warm and unsettled. Showers occurred in many localities during this period but in few cases were they heavy, the largest amount registered being 5 mms. at Port Said on the 27th. Showers, in some places accompanied by thunderstorms, were widespread in Upper Egypt on the 30th. and 31st. extending as far south as Luxor.

For the month as a whole the barometric pressure was well below normal, and the mean temperature slightly above normal, in all districts. The relative humidity in Alexandria and Cairo was slightly below normal. Rainfall in Lower and Middle Egypt was below normal. Duration of Sunshine at Giza averaged 9.1 hours per day.

DEPARTURES FROM NORMAL FOR OCTOBER 1944

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1015.1	—1.0	28.6	+0.7	20.0	+0.1	24.3	+0.4	1	—6
II.—Lower Egypt ...	1015.2	—1.0	30.4	—0.1	16.7	+0.3	23.6	+0.1	drops	—4
III.—Middle Egypt ...	1015.0	—0.9	31.0	+0.8	17.6	0.0	24.3	+0.4	drops	—2
IV.—Upper Egypt ...	1013.6	—0.9	33.9	+1.3	19.0	+0.4	26.4	+0.8	0	—1
V.—Western Desert...	1015.1	—0.8	33.9	+0.6	17.3	+0.6	25.6	+0.6	drops	0
VI.—Red Sea (Egypt).	1012.5	—0.9	30.2	0.0	20.0	—0.4	25.1	—0.2	0	0

L. J. SUTTON,
Director, Meteorological Service.

State of the River

Lake Albert at Butiaba rose one centimetre during the month. Its level on November 1st. was 59 centimetres below the normal and 79 centimetres below the corresponding day of last year.

The Bahr el Jebel at Juba fell steadily during the first twenty days of the month; then rose slightly afterwards. The levels throughout the month were below both the normal and those of last year.

The River Sobat at Nasser rose at normal rate during the month. Its levels were below the normal but on the average a few centimetres above those of last year throughout the whole month.

The White Nile at Malakal rose at almost normal rate during the month. Its levels were almost similar to the normal but above those of last year throughout the month.

The Blue Nile at Roseires fell at normal rate. Its levels were below both the normal and those of last year during the month. At Khartoum the Blue Nile repeated the same features which were recorded at Roseires.

The River Atbara at Khashm el Girba fell at faster than normal rate during the whole month. Its levels on the whole were much below both the normal and those of last year throughout the month.

The Main Nile at Kajnarti fell at faster than normal rate throughout the month. The levels were much below both the normal and those of last year.

Filling of Aswan Reservoir was started on the third of October and by the end of the month level reached 115.60 metres with 2730 millions cubic metres impounded in the Reservoir.

The difference of the mean levels in October 1944 from those of October 1943, and from the normal 1906-1935 were :—

STATION	MEAN DIFFERENCE OF LEVELS	
	October 1944 minus 1943	October 1944 minus Normal
	Metre	Metre
Butiaba *	— 0·79	— 0·59
Juba	— 0·40	— 0·61
Nasser †	+ 0·05	— 0·20
Malakal	+ 0·12	— 0·06
Roseires	— 0·82	— 0·74
Khartoum	— 0·56	— 1·23
Khashm el Girba	— 1·02	— 0·90
Kajnarti	— 0·80	— 1·37

* For November 1st, 1944.

† Nasser normal is for 1922-35 only.

Y. M. SIMAIKA,
Director, Hydrological Service.

Ministry of Public Works, Egypt.—Physical Department

REPORT ON THE WEATHER AND STATE OF THE RIVER FOR NOVEMBER 1944

The Weather

Apart from the first few days, unusually cool, especially in the second half of the month. Exceptionally heavy rain near the end of the first week ; rainy spells about the middle of the month and in the last week.

At the beginning of the month the weather was much warmer than usual, with fresh northeasterly winds which reached a velocity of 75 kilometres an hour at Helwan, while there were light showers in both Lower and Upper Egypt. On the 3rd 20 millimetres of rain fell at Qosseir, on the Red Sea coast, the largest amount registered there in a single storm for the last ten years.

The deepening of a depression near Cyprus on the 5th was accompanied by the arrival of westerly winds which brought a large fall in temperature, and conditions were disturbed for several days during which very heavy rain was widespread. Between the 5th and 9th the amount recorded at Borollos was 53 millimetres, at Mex 49, at El Arish 45, at Mersa Matruh 39, at Alexandria 36, while many other localities received unusually heavy rain for the time of year. After this exceptionally rainy spell the weather became milder by day, but the night temperature continued below normal, with light winds mainly from a northerly quarter.

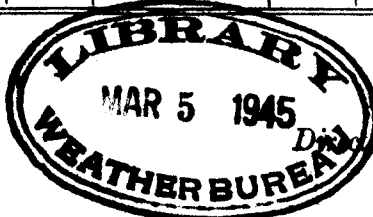
On the 16th the weather in northern Sinai became very unsettled, and during the night a severe thunderstorm occurred at El Arish, with 24 millimetres of rain, and a further 22 millimetres fell on the following night.

A depression situated over the northeastern Mediterranean on the 18th resulted in the arrival of strong northwesterly winds in Egypt, with cold and showery weather for two days, but the rain was nowhere heavy. The weather remained unusually cool for a week ; day temperatures in Upper Egypt were at times as much as 7 °C below the normal for the time of year. A further rainy spell began on the 23rd. At Alexandria 7 millimetres fell on that day, and 9 millimetres on the following day ; the wind there reached a velocity of 70 kilometres an hour from the west. Conditions continued showery and unsettled until the end of the month.

For the month as a whole the barometric pressure was everywhere considerably below normal ; temperature was also below normal in all districts. In Lower Egypt the rainfall was nearly double the normal amount. At Alexandria the total was 59 millimetres compared with an average of 32 millimetres, and rain fell on thirteen days, the average number being six. Rainfall was greatest at El-Arish, where although rain fell on only five days the amount reached 96 millimetres. The normal amount for November is only 13 millimetres, and the previous highest for the month in the 37 years during which records have been kept is 54 millimetres. Sunshine at Giza averaged 7.5 hours per day, which is 91 per cent of the normal amount.

DEPARTURES FROM NORMAL FOR NOVEMBER 1944

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1016.2	—1.2	24.3	—0.2	16.4	—0.1	20.4	—0.2	48	+29
II.—Lower Egypt ...	1016.0	—1.7	24.9	—1.3	13.4	0.0	19.2	—0.6	12	+ 5
III.—Middle Egypt ...	1016.4	—1.1	25.3	—0.6	13.6	—0.5	19.4	—0.6	2	— 1
IV.—Upper Egypt ...	1015.9	—1.0	26.6	—1.4	13.7	—0.1	20.2	—0.8	drops	0
V.—Western Desert...	1017.4	—0.5	26.1	—1.9	11.5	—0.2	18.8	—1.0	drops	— 1
VI.—Red Sea (Egypt).	1014.2	—1.4	26.2	—0.9	16.3	—0.4	21.2	—0.6	7	+ 4



L. J. SUTTON,
Director, Meteorological Service.

State of the River

Lake Albert at Butiaba fell one centimetre during the month. Its level on December 1, 1944 was 65 centimetres below the normal and 66 centimetres below the corresponding day of last year.

The Bahr el Jebel at Juba fell slightly during the month. The levels were well below both the normal and last year's throughout.

The River Sobat at Nasser started its annual fall by the beginning of the month. The levels fell nearly at a normal rate and were in general below both the normal and those of last years' during the whole month.

The White Nile at Malakal fell 4 centimetres during the month. The levels were on the average almost identical with those of last year levels but were below the normal.

The Blue Nile at Roseires continued its fall at normal rate during the first week then remained almost steady until the 14th., and fell again till the end of the month. The levels were below both the normal and those of last year's throughout. At Khartoum the river repeated the same features recorded at Roseires.

The Main Nile at Kajnarti fell at nearly normal rate during the whole month. The levels were on the average 1.50 metres below the normal and 90 centimetres below those of last year's.

The difference of the mean levels in November 1944 from those of November 1943 and from the normal 1906 -1935 were :-

STATION	MEAN DIFFERENCE OF LEVELS	
	November 1944 minus 1943	November 1944 minus Normal
	Metre	Metre
Butiaba *	- 0.66	- 0.65
Juba	- 0.43	- 0.72
Nasser †	- 0.26	- 0.36
Malakal	+ 0.02	- 0.13
Roseires	- 0.51	- 0.28
Khartoum	- 0.36	- 0.86
Kajnarti	- 0.88	- 1.49

* For the first day of the month

† Nasser normal is for 1922-35 only.

Y. M. SIMAIKA,
Director, Hydrological Service.

APR 20 1945

Ministry of Public Works, Egypt.—Physical Department

REPORT ON THE WEATHER AND STATE OF THE RIVER FOR DECEMBER 1944

The Weather

An unusually wet month generally ; very heavy rain in the north of the Delta early in the month; remarkably heavy and prolonged rainstorms at the end of the month, causing widespread damage to buildings and communications. Slightly cooler than usual during the day but milder than usual at night. Pronounced cold wave began at the end of the month.

On the 3rd of the month a depression was situated over the eastern Mediterranean and the weather was unsettled with widespread showers and cool southwesterly winds which reached the force of a fresh gale at Alexandria, where 46 millimetres of rain fell in three days, during which period 65 millimetres were registered at Mex and Kafr el Dawar, 61 at Buseilli and 51 at Borollos. In coastal districts the rain was in many places accompanied by thunderstorms. Light showers occurred as far south as Minya and conditions remained unsettled until the 5th. There was further rain in the Delta on the 8th. The weather then became settled and milder, with northeasterly winds and thick morning mists.

On the 12th and 13th conditions were again disturbed, with showers from the coast to Cairo and thunderstorms at Port Said and Danietta. The weather was then for the most part fine for three days, but showers occurred in the northern part of the Delta on the 17th and on several following days ; at Alexandria rain fell every day, with one exception, from the 16th to the end of the month. On the 24th 14 millimetres were recorded at Rosetta and 12 millimetres at Alexandria.

On the morning of the 29th a deep depression was situated over the central Mediterranean and easterly winds prevailed throughout Egypt. By the following morning a small secondary had formed off Salum ; winds in Egypt were southeasterly and the weather mild, while frequent showers occurred over Upper and Lower Egypt and the northern Red Sea ; rain also fell in the western desert. During the night a cold front passed over Egypt ; the intensity of rainfall became much greater and the weather much colder. The night of 29/30th was warmer than the afternoon of 31st in Cairo when the temperature did not rise above 13°C (55°F) compared with the average value of 20°C (68°F) at this time of year. During this storm, in which the rain fell continuously for an unusually long time, the rain was much heavier over Middle Egypt than in the north. The following are the amounts of rain registered at selected stations during the whole storm : Fayum, 56 ; Helwan, 42 ; Cairo, 35 ; Ismailia, 34 ; Port Said, 20 ; Qena, 18 ; Asyut, 14 ; Alexandria 7 millimetres.

For the month as a whole the barometric pressure was much lower than usual throughout Egypt. Day temperatures were slightly below normal in most places but night temperatures were above normal in all districts ; the mean temperature was slightly above normal in Lower and Middle Egypt and normal elsewhere. The month was cloudier than usual, the duration of sunshine in Cairo averaging 6.3 hours per day compared with a normal of 7.3 hours.

Throughout Egypt rainfall for the month was much above normal. At Alexandria rain fell on twenty one days compared with an average of ten days. In Cairo rain fell on ten days but except on four days it was negligible in amount. The following table shows the month's total for a number of stations, together with the normal amount and the highest registered in any previous December :

TOTAL RAINFALL (M/MS) IN DECEMBER 1944

Station		Normal	1944	Previous Highest	
Alexandria	...	57	89	159	1905
Mex	...	50	114	41	1905
Borollos	...	40	104	47	1943
Kafr el Dawar	...	39	132	46	1905
Atf	...	23	81	71	1905
Port Said	...	15	27	79	1893
Cairo	...	4	35	52	1921
Helwan	...	4	44	27	1921
Fayum	...	3	63	26	1929
Asyut	...	1	14	14	1929

DEPARTURE FROM NORMAL FOR DECEMBER 1944.

DISTRICTS	BAROMETRIC PRESSURE		TEMPERATURE						RAINFALL	
			MAXIMUM		MINIMUM		(MAX + MIN)/2			
	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal	1944	Difference from Normal
	m.b.	m.b.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
I.—Mediterranean ...	1016.3	—1.7	20.3	+0.1	12.8	+0.9	16.6	+0.5	61	+26
II.—Lower Egypt ...	1016.6	—2.1	21.3	—0.2	9.8	+1.0	15.6	+0.4	33	+23
III.—Middle Egypt ...	1017.0	—2.0	21.4	+0.4	9.9	+0.4	15.6	+0.4	36	+32
IV.—Upper Egypt ...	1017.1	—2.0	22.6	—0.3	9.4	+0.4	16.0	0.0	16	+15
V.—Western Desert...	1018.0	—1.9	22.4	—0.5	7.1	+0.5	14.8	0.0	3	+ 2
VI.—Red Sea ...	1015.6	—1.9	23.3	—0.2	12.9	+0.2	18.1	0.0	3	+ 1

L. J. SUTTON,
Director, Meteorological Service.

State of the River

Lake Albert at Butiaba fell 10 cms. during the month. The level on January 1st, 1945 was 72 cms. below the normal and 64 cms. below last year's.

Bahr El Jebel at Juba fell 4 cms. during the month, the levels were much below both the normal and last year's levels throughout the month.

The River Sobat at Nasser continued to fall faster than normal rate during the first fortnight and less than normal rate thereafter. The levels were, on the average, much below the normal and little below last year's levels.

The White Nile at Malakal also fell faster than normal rate throughout the month. The levels in general were below both the normal and last year's.

The Blue Nile at Roseires fell slower than normal rate, the levels which were 12 cms. below the normal at the beginning of the month were 12 cms. above it by its end. On the average, the levels were nearly similar to the normal but much below last year's levels. At Khartoum the levels dropped at a normal rate but were much below the normal and last year's.

The Main Nile at Kajnarty continued to fall at normal rate for the first fortnight, remained nearly steady up to the 20th. then fell again till the end of the month. The levels were much below the normal and last year's throughout the month.

The difference of the mean levels in December 1944 from those of December 1943 and from the normal 1906-1935 were :—

GAUGE	DIFFERENCE OF MEAN LEVELS	
	December 1944 minus Dec. 1943	December 1944 minus Normal
	Metre	Metre
Butiaba *	— 0.64	— 0.72
Juba	— 0.52	— 0.73
Nasser †	— 0.10	— 1.15
Malakal	— 0.15	— 0.39
Roseires	— 0.30	— 0.03
Khartoum	— 0.26	— 0.81
Kajnarty	— 0.30	— 1.12

* January 1st. 1945

† Nasser normal is for 1923-35

The following is a review of the state of the river during the past year :—

With rather better than average spring rains which occurred in the Sobat and the Blue Nile regions by the end of March and the beginning of May, river conditions in the spring and early summer were a little above normal and the emptying of both the Gebel Aulia and Aswan Reservoirs followed a normal course, except as in last year, Aswan Reservoir was fully emptied out and navigation between Halfa and Shellal was stopped from the 15th to the 29th July.

The flood was almost normal until the end of August, but at the beginning of September a heavy fall in the upper reaches of the river indicated the probability of a low flood. Water was therefore stored in the Aswan Reservoir with a view of assisting the Esna basins should the contingency of a low flood materialize. On September 5th, the Reservoir was therefore gradually raised from 99.50 to 107.40 metres on September 14th. But owing to the improvement of the Blue Nile and Atbara, and the fact that the Aswan storage was sufficient to cover Esna basins, the Aswan D.S. gauge was maintained at a level of about 91.20 and the storage run off.

Early in October the programme of filling of the Aswan Reservoir was normally carried out.

Y. M. SIMAIKA.

*Director Hydrological Service,
Physical Department.*